

Implementing mobile-assisted language learning (MALL) in an EFL context: Iranian EFL teachers' perspectives on challenges and affordances

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The implementation of computer-assisted language learning (CALL) has provided tremendous opportunities for language teachers to promote their computer literacy and adopt a learner-centered approach to teaching. Accordingly, with the rising advent of language learning technologies, language teachers would occupy a fundamental role in preparing and encouraging students to use various technologies for language learning purposes. In particular, the purpose of this study is to explore the attitudes of Iranian English as a foreign language (EFL) teachers toward the implementation of mobile-assisted language learning (MALL). The survey target participants were 168 EFL teachers who worked in a number of language teaching institutions in Iran. In-depth interviews with 55 EFL teachers were conducted as well. The findings from the survey and interview studies indicated moderately positive attitudes of the participants toward the use of mobile phones for language learning and teaching. The findings suggest that the presence of a couple of perceived challenges might be the reason for the nonuse of mobile phones for EFL learning and teaching in Iran. The teachers' reported that they do not use any kind of MALL activities or software programs in their EFL courses. Results demonstrated that the EFL teachers did not have the required skills to use/develop MALL activities. The paper proposes recommendations and suggestions on how to implement MALL and remove potential barriers to MALL implementation in EFL contexts.

Introduction

Kukulska-Hulme and Shield (2008) define MALL as "the use of technologies such as 149

mobile phones, MP3/MP4 players, PDAs and palmtop computers for language learning" (p.3). They also argue that the use of mobile phones in language teaching is the most investigated area of research in the literature of **MALL**. Accordingly, **CALL** researchers and experts have expressed interest in the implementation of **MALL** in **EFL** contexts (Stockwell & Sotillo, 2011). This popularity of the implementation of **MALL** is due to the learning opportunities and affordances that mobile phones would create for language learners. Specifically, the use of mobile phones in language learning provides teachers and learners with substantial educational benefits, including the possibility of recording and playing audios, low costs, portability, learner friendliness, easy access, and interactivity (Kukulska-Hulme & Shield, 2008; Stockwell, 2010; Wishart, 2008). Research has suggested that the use of mobile phones enables language learners to make communication with their teachers and peers more easily and conveniently. **MALL** researchers assert that this ease of communication with teachers and peers is a major affordance of the utilization of mobile phones for language learning (Nah, White, & Sussex, 2008; Rosell-Aguilar, 2007). As a consequence, the existence of these affordances has inspired **EFL** researchers to evaluate the suitability of the use of mobile phones to enhance the quality of learning and teaching.

Despite general acceptance of the implementation of **MALL** in **EFL** contexts, a number of **EFL** experts have pointed out considerable challenges to the use of mobile phones for language learning and teaching. As Stockwell (2008) argues, one major obstacle to the use of mobile phones for language teaching is students' reluctance to use mobile phones for their educational and academic purposes. Thornton and Houser (2002) assert that the small screen size of mobile phones would create another challenge to the implementation of **MALL**. High cost of the use of mobile phones for educational purposes might discourage students and teachers from implementing **MALL** in **EFL** courses accordingly (Stockwell, 2007). Similarly, limited presentation of graphics of mobile phones may act as another impeding factor (Albers & Kim, 2001).

Alternatively, some **MALL** researchers believe that the use of mobile phones for language learning might facilitate the process of language learning while possible challenges can be accommodated or alleviated (e.g., Stockwell, 2008; Stockwell, 2012; Thornton & Houser, 2005). Stockwell (2012) maintains that new technologies are emerging while new types of practical constraints might appear. Unavoidably, as Stockwell (2012) points out, "mobile learning will continue to take on new shapes and forms as it becomes more familiar to both teachers and learners" (p. 30). Therefore, it is expected that most limitations of mobile phones for language learning will disappear in the future.

Previous research

Although a substantial body of research has been undertaken regarding students' acceptance of and satisfaction with technology use in educational contexts, the issue of teachers' perceptions about the use of technology for educational purposes has remained less investigated. The findings related to research on teachers' attitudes toward the use of technology for educational purposes suggest that there is a general consensus among the majority of teachers over the suitability of technology use for **EFL** and educational purposes in Asia and other parts of the world (e.g., Aydin, 2012; Eugene, 2006; Hu, Clark, & Will, 2003; Kim, 2002; Ismail, Almekhlafi, & Al-Mekhlafi, 2010; Motaghian, Hassanzadeh, & Moghadam, 2012; Pynoo, Devolder, Tondeur, Van Braak, Duyck, & Duyuk, 2011; Park & Son, 2009; Simonsson,

2004; Yuen & Ma, 2008). Technology has been regarded as a beneficial and effective teaching aid which would offer a number of affordances and merits for both teachers and students.

More specifically, regarding **EFL** teachers' perceptions of the implementation of **CALL** and educational technology in the Middle East, Dashtestani (2012) investigated Iranian **EFL** teachers' perspectives on possible challenges and affordances of the implementation of **CALL**. The findings showed that Iranian **EFL** teachers held positive attitudes toward **CALL** implementation and the use of technology in **EFL** courses. Despite teachers' general acceptance of technology use for language learning and teaching, the presence of a number of challenges, including "time constraints, lack of computer-based facilities, lack of financial and technical support, inadequate teacher training programs, and rigid curricula" (p.65), impeded the process of integration of technology into Iranian **EFL** instruction. In the **UAE**, Ismail et al. (2010) explored language teachers' attitudes toward technology integration. They concluded that teachers considered the use of technology as an effective approach to enhancing the quality of teaching and learning languages. With regard to the Syrian educational context, Albirini (2006) found that Syrian teachers welcomed technology incorporation into their teaching practices and showed positive attitudes toward it.

Accordingly, an enormous amount of research has been carried out on teachers' perceptions of mobile learning in various educational contexts. However, to date, very limited research has been conducted on the issue of language teachers' perceptions of **MALL**/mobile learning implementation in **EFL** contexts. Although the findings of research on teachers' attitudes toward mobile learning have demonstrated general acceptance and satisfaction, the findings of some studies show that teachers express concerns over the implementation of mobile learning. For instance, Seppälä and Alamäki (2003) explored teacher trainees' perspectives on the use of mobile technology for educational purposes. The findings indicated that the teachers held positive attitudes toward delivering digital pictures through the use of short message service (**SMS**). The researchers proposed that mobile learning is an interesting area of research which requires more attention and investigation. In Cyprus, Serin (2012) analyzed teachers' acceptance of mobile learning. The teachers had limited knowledge and information of mobile learning. It was reported that some teachers believed that the implementation of mobile learning might reduce the quality of communication in the classroom. In addition, Şad and Göktaş (2013) investigated pre-service teachers' preference for the use of either laptops or mobile phones. It was reported that the teachers adopted more positive attitudes toward the use of laptops than mobile phones. The need for awareness-raising on the use of mobile phones for teaching purposes was considered necessary. In a qualitative study using interviews, Tai and Ting (2011) studied language teachers' attitudes toward mobile-assisted language learning and its challenges in Taiwan. They reported that the teachers perceived that the use of mobile technology improved the process of language teaching. The teachers also pointed out some challenges to the adoption of mobile technology, including "the changing role of the mobile device, technical difficulties, pedagogical potential, and workload" (p. 15). The study revealed that potential challenges and obstacles to the application of mobile technology for language teaching should be accommodated and removed in order to facilitate the process of technology integration into language teaching contexts.

Furthermore, investigating the perceptions of educators about mobile learning was the focus of the study conducted by Zulkafly, Koo, Shariman, and Nazri (2011). They pointed out that educators adopted positive perspectives on the implementation of mobile learning. The educators welcomed the application of new approaches to teaching and learning. **151**

In Malaysia, the issue of teachers' readiness for and acceptance of using mobile phones for educational purposes was explored. Ismail, Azizan, and Azman (2013) reported that even though Malaysian teachers regarded mobile learning as beneficial and efficient, they did not have the required readiness for the use of mobile phones for educational purposes. There was a considerable correlation between teachers' motivation for and awareness of technology and their readiness for the implementation of mobile learning. Following the same research line, Cruz, Assar, and Boughzala (2012) analyzed teachers' perceptions of mobile learning in a business school. The teachers reported that the implementation of mobile learning would have several benefits for students. Availability, enhanced communication opportunities, and interactivity were the perceived merits of mobile learning. However, the teachers pointed out that there were a wide range of technological, individual, instructional, and pedagogical challenges to the efficient implementation of mobile learning.

Thomas and Bolton (2012) investigated teachers' attitudes toward the use of mobile phones in the class. They identified that the teachers supported the use of mobile phones for educational purposes. The teachers believed that the use of mobile phones would increase students' motivation and participation. The obstacles to the use of mobile phones included high costs of and lack of access to mobile phones. Goad (2012) assessed teachers' attitudes toward the application of mobile technology for educational purposes. A positive correlation existed between teachers' use of mobile technology and their ability to use it efficiently. Additionally, teachers had different proficiency levels in using mobile technology for their teaching purposes. Another study which has been directed to teaching and teachers has been conducted by Tai (2012). He has used a task-based approach to designing a contextualized **MALL** practice. The results of the evaluation of the effectiveness of this contextualized **MALL** practice showed that contextualizing **MALL** practices would enhance language learning and improve students' motivation. However, the study aimed at developing **MALL** practices that improve language teaching and motivate learners to learn more effectively. He suggested that the study can be a reference for language teachers on how to develop new kinds of **MALL** practices.

Obviously, language teachers' attitudes toward a certain technology can have considerable effects on students' use of that technology in the future. "Considering the pivotal role of **EFL** teachers in language teaching contexts, **EFL** teachers who take positive attitudes toward technology can encourage their students to use technology in their learning practices accordingly" (Dashtestani, 2012, p. 65). Therefore, language learners' attitudes toward technology should not be considered detached from teachers' perspectives on technology. Similarly, insights have been provided into language learners' perceptions of **MALL** implementation and mobile learning while very little has been investigated on teachers' perceptions of the use of mobile phones in language learning and teaching. Language teachers can develop appropriate and context-based mobile-assisted tasks and activities which would encourage language learners to use mobile phones for their language learning. At least, language teachers would have the ability to make **EFL** students aware of possible affordances and uses of mobile phones for language learning.

To date, to the knowledge of the researcher, very limited research has been undertaken to evaluate the perceptions of language teachers on the implementation of **MALL**. Furthermore, there is a serious lack of research on the issue of **MALL** implementation in the Iranian language teaching and learning contexts. Accordingly, the current study is an attempt to provide insights into Iranian language teachers' perceptions on the implementation of **MALL**.

in **EFL** courses. Possible challenges which might impede the implementation of **MALL** from the perspectives of language teachers have been identified and discussed.

The following research questions were formulated to achieve the aims and objectives of this study:

1. What are the attitudes of Iranian **EFL** teachers' about the use of mobile phones in the Iranian **EFL** context?
2. What are the perceptions of Iranian **EFL** teachers on the possible challenges to the use of phones in the Iranian **EFL** context?
3. What are the perceptions of Iranian **EFL** teachers on the current state of using mobile phones in the Iranian **EFL** context?
4. What are the perceptions of Iranian **EFL** teachers on their ability to develop/use **MALL** activities/software in the Iranian **EFL** context?

The study

Research design and instruments

The current study is based on a mixed-methods research design using questionnaires and interviews. The use of two instruments was considered in order to conduct a methodological triangulation of the data. Methodological triangulation would provide researchers with validated and enriched data (Best & Kahn, 2006). Specifically, the aim of the study was to provide both qualitative and quantitative data on the perceptions of Iranian **EFL** teachers of the implementation of **MALL**.

The design of the questionnaire came from reviewing previous research and theoretical foundations on mobile-assisted language learning (e.g., Kukulska-Hulme & Shield, 2008; Stockwell, 2007; Stockwell, 2010; Wishart, 2008). The content of the survey was validated by a team of seven **EFL** and educational technology university professors. Several evaluation sessions were held and the content and layout of the questionnaire were improved significantly after receiving feedback from the team of experts. The 27-item survey consisted of four sections based on a Likert-scale format. The first section (Cronbach Alpha = 0.85, 10 items) explored **EFL** teachers' attitudes toward the use of mobile phones for language learning/teaching and was based on a four-point Likert scale format from *strongly disagree* to *strongly agree*. The second section (Cronbach Alpha = 0.82, 10 items) analyzed **EFL** teachers' perspectives on the challenges to the use of mobile phones for language learning/teaching based on a four-point Likert scale format from *strongly disagree* to *strongly agree*. The third section (2 items) examined **EFL** teachers' perceptions of the current use of mobile phones for their **EFL** courses. The items of this section were based on a five-point Likert scale format from *never* to *always*. The last section (Cronbach Alpha = 0.79, 5 items) sought **EFL** teachers' perceptions of their ability to use/develop **MALL** activities and software tools. This section was based on a five-point Likert scale format from *not proficient* to *very proficient* (Appendix 1).

The interview study was designed based on the same literature review. The interview was based on a semi-structured format and open-ended questions were used to collect the data. For triangulation purposes, the interview questions followed the same aims and objectives of the survey study. Similar to the questionnaire study, seven **EFL** and educational technology university professors validated the content of the interview questions. The following questions were asked to assess the perceptions of the participants:

1. What do think about the use of mobile phones for the **EFL** contexts? What are the possible benefits?
2. What do you think are the challenges to using mobile phones for language learning/teaching?
3. What kinds of mobile-based activities do you use in your **EFL** courses?
4. What kinds of mobile-based activities do your students use in your **EFL** courses?
5. What do you think about your ability to use/develop mobile-based activities and software in your **EFL** contexts?

Sample

The questionnaire participants for this study included 168 **EFL** teachers from 13 different language teaching institutions in Iran. The participants accepted to take part in the questionnaire study voluntarily. The cluster method of sampling was used for the selection of the participants of this study. Based on their reports in the questionnaire, the teachers had an average of 9.12 years of teaching experience. The average age of the participants was 35.7 years. The participants also had an average of 8.5 years of using mobile phones. All these teachers were those who had participated in language teaching training/education courses before their employment. The sample comprised 96 female and 72 male participants. While 108 participants had studied English-related majors, 60 participants had studied majors not related to English at university. A total of 81 **EFL** teachers were **MA/MS** holders and 87 teachers were **BA/BS** holders. Only teachers who had more than 2 years of teaching English were included in the study. These **EFL** teachers taught English as a foreign language at different levels of proficiency. The teachers further reported that their levels of English language proficiency were upper-intermediate or advanced.

After the questionnaire administration phase of the study, the same teachers were invited to participate in the interview study. After ensuring their voluntary participation, 55 **EFL** teachers accepted the invitation to take part in the second phase of the study.

Data analysis and procedures

The mean, standard deviation, and percentages were used to analyze the results of the questionnaire study. **SPSS 16** was used for the data analysis. The results of interviews were analyzed based on content analysis and reporting the emerging themes. After recording and transcribing the interviews, the emerging themes which could be used for the purposes of the study were identified and reported. In different parts of the findings section, the original statements made by the participants were included to enrich the data.

Findings

EFL teachers' attitudes toward the use of mobile phones for language learning/teaching

Results of the questionnaire study. Based on results of the questionnaire concerning the **EFL** teachers' attitudes toward the implementation of **MALL**, the total mean of the section (2.651) shows that the **EFL** teachers have moderately positive attitudes toward the implementation of **MALL**. The teachers held positive attitudes toward some affordances of the

use of mobile phones for EFL including facilitation of learning, portability, use of multimedia, time-efficiency, possibility of connecting to the Internet, and possibility of ubiquitous learning for language learners. However, 39.3 % of teachers disagreed that mobile phones can be used for teaching different language skills (Table 1).

Table 1: EFL teachers' attitudes toward the use of mobile phones for EFL contexts

	Strongly disagree (%)	Disagree (%)	Agree (%)	Strongly agree (%)	Mean	SD
The use of mobile phones will facilitate the process of language learning	12.5	19	43.5	25	2.80	0.96
Portability is an important property of mobile devices	8.3	13.4	41.7	36.3	3.07	0.91
The use of mobile phones can create interactive learning environments	16.1	29.1	49.4	5.4	2.43	0.82
The multimedia used in mobile phones is useful for EFL learning	6	11.3	58.3	24.4	3.01	0.78
Scaffolding can be provided for each learner through the use of mobile phones for language teaching	17.3	31	47	4.8	2.31	0.81
Mobile phones can be used to teach/learn different language skills	21.4	39.3	26.8	12.5	2.32	0.95
The use of mobile phones for language teaching/learning is cost-effective	17.9	45.8	29.8	6.5	2.26	0.83
The use of mobile phones for language teaching/learning is time-efficient	10.1	20.8	44.6	24.4	2.83	0.91
Mobile phones can be connected to the Internet at any time	3	11.9	40.5	44.6	3.27	0.78
Mobile phones provide learners with ubiquitous language learning opportunities	5.4	16.7	30.4	47.6	3.21	0.90
Total mean = 2.651						

Results of the interview study. The results of the interview show that the majority of language teachers (92.72%) showed positive attitudes toward some affordances of the use of mobile phones for language teaching. The possibility of connectivity to the Internet at anytime and anywhere (94.55%) is a very important affordance of the use of mobile phones based on the EFL teachers' interview reports.

I think one of the best benefits of the use of mobile phones for language teaching is that students have the opportunity to connect to the Internet in the classroom and outside the classroom. This issue might help students to be more autonomous and independent (Teacher 15)

*When **EFL** learners use mobile phones for language learning, they can have access to thousands of online **EFL** resources and this Internet access is extremely facilitative and very useful both for **EFL** teachers' quality of teaching and learners' learning. (Teacher 26)*

*Well, mobile phones will give **EFL** students the chance to be online in **EFL** classrooms. Mobile phones are particularly effective to be used for **EFL** courses in which there are not any Internet-based facilities. Mobile phones will play important roles in these **EFL** courses since language learners can get connected to the Internet easily. (Teacher 32)*

As it was reported in the survey, the majority of participants (87.27%) believed that the audio-visual properties of mobile phones can help learners to learn more easily.

It seems that mobile phones can create interactivity by their multimedia properties. These multimedia properties are very useful to improve students' listening abilities. (Teacher 7)

*In our **EFL** context we lack some basic technological facilities. At least, the use of mobile phones will let **EFL** students to have access to some services that they lack in the classroom. One of those important services is the multimedia. (Teacher 18)*

As it was revealed in the survey, the participants (83.64%) believed that mobile phones are light and they require little space to be kept and are easy to be carried.

*Mobile phones are small and can be carried very easily just unlike personal computers and some heavy laptops. **EFL** students can benefit from this affordance of mobile phones to learn English. (Teacher 47)*

*Most students complain about bringing heavy laptops and dictionaries to **EFL** classrooms. The situation is completely different when it comes to mobile phones. I think being portable is a valuable feature of mobile phones. (Teacher 42)*

A small proportion of language teachers (7.3%) were mostly neutral about the use of mobile phones for language learning/teaching. It seemed that they were not aware of or acquainted with **MALL** and its implementation in language teaching.

Honestly, I don't have enough knowledge of the use of mobile phones for language learning/teaching. I think I'm not in a position to judge or give my opinions then. (Teacher 13)

*The use of mobile phones for language teaching? I am not sure whether this is possible in our **EFL** context or at least I don't have any idea how it might be. (Teacher 39)*

EFL teachers' perspectives on the challenges to the use of mobile phones for language learning/teaching

156 **Results of the questionnaire study.** Based on the results shown in Table 2, the **EFL** teachers agreed on the importance of most challenges to the implementation of **MALL**. Specifically,

lack of **MALL** activities and software tools, small screen size, use of mobile phones for non-academic purposes, high costs of Internet connection, slow Internet speed, connectivity problems, students' lack of knowledge to use mobile phones for academic purposes, and students' resistance to the use of mobile phones for academic purposes were the perceived challenges to the implementation of **MALL**.

Table 2. EFL teachers' perspectives on the challenges to the use of mobile phones for language learning/teaching

	Strongly disagree (%)	Disagree (%)	Agree (%)	Strongly agree (%)	Mean	SD
The small screen size of mobile phones	2.4	14.3	32.7	50	3.32	0.79
Slow Internet speed	7.1	11.3	59.5	22	2.97	0.78
Internet connectivity problems	4.8	16.7	54.8	23.8	2.95	0.82
Students' non-academic use of mobile phones	1.2	7.7	50.6	40.5	3.31	0.66
High costs of mobile phones	11.9	19.6	41.1	27.4	2.86	0.97
High cost of connectivity to the Internet	1.8	5.4	45.8	47	3.38	0.68
Students' lack of skill/ knowledge to use mobile phones for academic purposes	5.5	7.3	56.5	30.7	3.12	0.78
Incompatibility of the use of mobile phones with language teaching/learning	22.6	38.1	35.1	4.2	2.20	0.84
Students' resistance to the use of mobile phones for academic purposes	3	7.1	48.2	41.7	3.29	0.73
Lack of language learning mobile-based software and activities	1.2	8.9	37.5	52.4	3.41	0.7

Results of the interview study. In the interviews, the participants expressed their concerns over some limitations of **MALL**. As it was revealed in the survey results, the majority of participants (85.45%) were not aware of the availability of **MALL** software tools and activities. Some teachers (54.55%) also mentioned that **MALL** activities and software tools are not available to them and their students.

*I think one important challenge is how to gain access to some appropriate and well-designed language learning activities which can be used via mobile phones. I believe in our **EFL** context (Iran), it's not easy to have access to these activities and exercises. (Teacher 52)*

Well, all students have mobile phones, but are we able to give them good language tasks to do via their devices? I think our students can find some free activities and software on the

Internet while I am not optimistic about the suitability of these free language learning activities. (Teacher 44)

*We even lack computer-based language learning activities and software. In my view, the availability of software for mobile learning is a big barrier to its use in **EFL** contexts. (Teacher 17)*

Internet-based problems were considered as discouraging for many **EFL** teachers (69.09%). Connectivity, slow speed, and high costs of the Internet connections were the other important barriers to the use of mobile phones for language learning.

*The use of the Internet can help **EFL** students to learn English and mobile phones can help them in this regard. But, the Internet connection via mobile phones is very slow and boring for many students. (Teacher 28)*

I usually use my mobile phone to connect to the Internet. There are lots of disconnections and high costs that discourage you from using your mobile phone. The same situation will occur when students wish to use their mobile phones for language learning. (Teacher 40)

Some teachers (50.9%) also asserted that **EFL** students are accustomed to using mobile phones for fun and non-academic purposes. They stated that it is very hard to persuade them to use their mobile phones for their academic purposes.

*For **EFL** students mobile phones are devices that they use for having fun most of the times. I suppose it's very difficult to train them to use their mobile phones for their **EFL** learning purposes. (Teacher 35)*

These are students who should accept mobile phones as language learning tools. At present, I think they are not ready since they use mobile phones for non-academic activities and this is a serious obstacle. (Teacher 53)

EFL teachers' perceptions of the current use of mobile phones for their EFL courses

Results of the questionnaire study. Two items of the questionnaire were about the **EFL** teachers' perceptions of the current use of mobile phones by **EFL** teachers for their teaching and **EFL** students for their learning. The majority of **EFL** teachers (97.61%) reported that they "never" use mobile phones for their teaching. The remaining 2.38% of participants asserted that they "rarely" make use of **MALL** activities in their teaching. The majority of **EFL** teachers (94.64%) also reported that their students "never" use mobile phones for language learning in their **EFL** courses.

Results of the interview study. The results of the interview showed that the **EFL** teachers (96.36%) participated in the study do not make use of any kind of **MALL** activities or practices. The teachers (92.73%) reported that their students do not use mobile phones for language learning in their **EFL** courses either. Few teachers (16.36%) mentioned that some students use their dictionaries on their mobile phones to check the meanings of new words.

EFL teachers' perceptions of their ability to use/develop MALL activities and software

Results of the questionnaire study. As Table 3 illustrates, the total mean of this section is equal to 2.518 which shows that the majority of **EFL** teachers perceived themselves as fairly proficient or undecided concerning their ability to use mobile phones for language teaching.

Table 3. EFL teachers' perceptions of their ability to use/develop MALL activities and software

	Not proficient (%)	Fairly proficient (%)	Undecided (%)	Proficient (%)	Very proficient (%)	Mean	SD
Designing MALL activities	31.5	29.2	34.5	4.8	0	2.13	0.92
Ability to adapt your teaching styles/ techniques to MALL	13.7	28	51.2	6	1.2	2.52	0.84
Ability to evaluate MALL software tools	17.3	31.5	49.4	1.8	0	2.36	0.79
Your ICT literacy to use mobile phones for language teaching	10.7	33.9	23.2	25.6	6.5	2.84	1.13
Ability to use MALL software tools	11.3	15.5	64.3	6	3	2.74	0.85
Total mean = 2.518							

Results of the interview study. A large proportion of language teachers (83.64%) asserted that they were unfamiliar with the use of mobile phones for language teaching and learning. Some teachers (72.67%) stated that they did not have the expertise and knowledge on how to use mobile phones for language teaching and learning. Some language teachers (47.27%) also mentioned that they might need training on how to use mobile phones for teaching English. The point is that most language teachers are ready to receive some training on how to implement **MALL** in their teaching.

I am not familiar enough with the techniques and approaches that can be adopted to use mobile phones for language learning. I need to know about practical and theoretical basis of how to use mobile phones for language teaching. (Teacher 42)

*Using mobile phones for **EFL** contexts requires certain skills and expertise. I am not sure whether I possess these certain skills. I think I will be able to use mobile phones for my language teaching after having a short period of training. (Teacher 25)*

Generally speaking, I don't have adequate knowledge on how to use technology for language teaching. The use of mobile phones is not an exception in this regard. (Teacher 38)

*I know a lot of things about the use of mobile phones. But using mobile phones for **EFL** is a different story I guess. I reckon I have the technological knowledge of using mobile phones but I am not that competent in combining this technological knowledge with language teaching and learning requirements. (Teacher 20)*

Discussion and conclusion

This study was an attempt to address **EFL** teachers' perceptions of the implementation of mobile-assisted language learning in Iran. The data obtained from questionnaires and interviews illustrated that Iranian **EFL** teachers adopt moderately positive perspectives on the integration and implementation of **MALL**. In addition, the findings might suggest that Iranian **EFL** teachers are aware of possible merits and affordances of **MALL** implementation for language teaching and learning. As the findings suggest, one major affordance of **MALL** is that it enables students and teachers to be connected to the Internet in the classroom. The Internet can offer a wide range of benefits for language learning and facilitate the process of language teaching and learning. Specifically, the use of the Internet will improve interaction, communication, and problem-solving in the **EFL** classroom (Harris, 2002). The use of the Internet can help **EFL** teachers design a variety of interactive and motivating language learning tasks and activities. For instance, **EFL** teachers can create podcasts and improve students' access to class content and activities (Bongey, Cizadlo, & Kalnback, 2006). Since educational authorities and teachers can influence students' use of technology, the positive perspectives of Iranian **EFL** teachers would have direct implications for the inclusion of **MALL** in students' learning process (Cope & Ward, 2002). Furthermore, it is essential to identify technological needs of educational stakeholders before the application of technology for educational purposes (Roblyer, 2006). The findings of this study can be regarded as an analysis of Iranian **EFL** teachers' technological needs. Moreover, positive perceptions of Iranian **EFL** teachers about **MALL** implementation can be indicative of their high level of motivation for the use of mobile technology for their teaching. Even though the implementation of **MALL** is largely dependent on students' acceptance and positive attitudes, the use of any type of technology would not be feasible when teachers do not adopt positive attitudes toward it (Rakes & Casey, 2002). The results are commensurate with previous studies which showed teachers' positive attitudes toward mobile learning (Cruz et al., 2012; Ismail et al., 2013; Şad & Göktaş, 2013; Seppälä & Alamäki, 2003; Serin, 2012; Tai & Ting, 2011; Thomas & Bolton, 2012; Zulkaffly et al., 2011).

As Goad (2012) argues, teachers' attitudes toward the use of mobile phones would play a pivotal role in determining the efficiency of this technology for educational purposes and student use. Although in **EFL** contexts much attention has been directed to students' perceptions of suitability of **MALL** for language learning (e.g., Basoglu, & Akdemir, 2010; Fujimoto, 2012; Hsu, 2013; Kennedy & Levy, 2008; Oberg & Daniels, 2012; Stockwell, 2008), the issue of teachers' perceptions of this technology has remained neglected and overlooked (Al-Fahad, 2009). A plethora of opportunities for future research on teachers' perspectives on **MALL** implementation are available. Teachers' attitudes toward the implementation of **MALL** can be investigated in various language teaching contexts. Extreme caution should be exercised to evaluate both teachers' and students' perspectives on the use of mobile phones for language teaching and learning prior to the implementation of **MALL** programs. At present, it appears that **MALL** has been implemented in a number of **EFL** contexts based on students' acceptance of the technology without taking teachers' perspectives into account. Jones

(2001) asserts that both **EFL** teachers and students should have positive attitudes toward **CALL** for its successful implementation. Therefore, it is recommended that **EFL** authorities and providers devote their attention to **EFL** teachers' perceptions of new technologies and strive to match teachers' perceptions to perceptions and needs of students. The quality of teaching and learning will foster when both teachers and students are motivated and willing to use different technologies for their educational purposes. In addition, teachers' perceptions of the use of technology might differ from their actual use of technology. In terms of **MALL** implementation, future research should be focused on **EFL** teachers' actual use of mobile technology for language teaching.

Also of note was that the findings revealed that a number of challenges would impede the process of the integration of **MALL** into **EFL** instruction. As Stockwell (2012) argues, **EFL** learners and teachers should be patient about the limitations of **MALL** and find ways to alleviate the effects of these obstacles. One barrier that can be removed or alleviated by **EFL** teachers and authorities is students' use of mobile phones for non-academic and non-**EFL** activities. In this study, the teachers also pointed out students' resistance to the use of mobile phones for **EFL** purposes. According to Wang and Higgins (2006), it takes a long time to persuade language learners to accept a new technology. Dashtestani (2012) identified similar barriers to the implementation of **CALL** in Iran. It was suggested that both teachers and **EFL** authorities should take the responsibility for the removal of the current obstacles and challenges to **MALL** implementation. Definitely, teachers will not be able to normalize **CALL** when **EFL** authorities do not support and motivate them in this regard. The results of this study regarding teachers' perceptions of challenges to the implementation of **MALL** confirm the findings of previous research on the limitations of **CALL** implementation. Tai and Ting (2011) found similar technical and pedagogical challenges and barriers to the use of mobile phones in language teaching. They propose that challenges to the implementation of **MALL** should be eliminated in order to facilitate the incorporation of **MALL** in students' learning process. Similarly, Cruz et al. (2012) identified similar technological, individual, instructional, and pedagogical obstacles to effective implementation of mobile learning. Previous research on challenges to the implementation of **CALL** has demonstrated technical, individual, and pedagogical constraints on **CALL** implementation (e.g., Lam, 2000; Smerdon, Cronen, Lanahan, Anderson, Iannotti, & Angeles, 2000; Toprakci, 2002). **MALL** is a newly-developed branch of **CALL** and the elimination of its barriers and challenges might take much time and effort. Currently, further specific research should be undertaken to evaluate and measure the effect of each obstacle. More importantly, considering the context in which **MALL** is implemented is absolutely essential. Evaluating teachers' perspectives on the use of technology should be combined with the evaluation of the context and environment (Buckenmayer, 2011). As a consequence of this, further research into the nature of obstacles to **CALL** implementation in various **EFL** contexts would provide beneficial insights into the adoptions of strategies and measures to eliminate or control them.

Stockwell (2008) suggests that students' non-use of and resistance to the use of mobile phones for language learning might be linked to lack of their preparedness to accept or use mobile phones for their learning purposes. This preparedness might not be related to students' enthusiasm about the use of technology while it is directly related to the skills and expertise that they need to possess in order to meet the requirements of **MALL**. Even in the survey, the **EFL** teachers referred to students' lack of knowledge to use their mobile phones for academic purposes. **EFL** teachers and authorities are recommended to conduct research studies to examine Iranian **EFL** students' motivation and preparedness for the use of mobile

phones for their learning. Definitely, **EFL** teachers can play key roles in preparing **EFL** students for the implementation of **MALL**. **EFL** teachers can make **EFL** students aware of the skills and abilities which are required for successful implementation of **MALL** in **EFL** courses. However, these **MALL** skills and competences can be taught to learners provided that the **EFL** teachers have the required **MALL** skills and expertise. In addition, as reported by the participants, the problems of Internet connectivity and high costs of using mobile phones are perceived serious impediments which may discourage language teachers and learners from implementing **MALL**. These challenges are not pedagogical ones while can be accommodated by the measures that language teachers and **EFL** authorities might take. Stockwell (2008) is optimistic about alleviating the effect of the Internet connectivity challenge. **EFL** teachers can utilize **MALL** software programs and activities which require limited Internet connectivity. Alternatively, **EFL** providers can equip **EFL** courses with wireless systems so that students and teachers can make use of Internet-based affordances of mobile phones.

The findings show that the majority of Iranian teachers do not have the required skills for the implementation of **MALL**. Tai and Ting (2011) suggest that educational organizations should provide **EFL** teachers with **ICT** skills required for the implementation of **MALL**. They emphasize that educational providers should provide training for teachers through launching practical projects of **MALL**. Concerning the implementation of **CALL** in Iran, Dashtestani (2012) proposes that Iranian **EFL** teachers need practical and theoretical training and awareness-raising on the use of technology in language teaching. Practical **MALL** workshops can be held in which teachers develop and design **MALL** activities and tasks. One effective strategy is to encourage language teachers to participate in collaborative projects on **MALL** implementation. In these workshops, teachers can develop **MALL** activities and tasks collaboratively. This collaboration would improve the process of teacher development and teachers' **ICT** skills accordingly. Further, a wide range of **MALL** software programs are available to **EFL** teachers and providers. **EFL** providers should also facilitate teachers' access to effective and reliable **MALL** activities and software programs. Robinson and Latchem (2006) maintain that although the application of a new technology would provide opportunities for teachers to improve their quality of teaching, the use of these technologies might place numerous demands on them. One of these demands is related to teachers' levels of electronic literacy and their pedagogical knowledge of **CALL**. As Mishra and Koehler (2006) suggest, the simultaneous improvement of teachers' technological, pedagogical, and content (language proficiency for language teachers) competence can help them use technology for teaching purposes efficiently. Considering the improvement of any of these competences in isolation would not be an effective strategy to technology integration.

Lastly, **MALL** implementation is an uninvestigated area of research in the Iranian **EFL** context. Very little is known about the suitability of the implementation of **MALL** in the Iranian **EFL** context. More research is required to evaluate the suitability of the implementation of **MALL** from the perspectives of language learners. Furthermore, future research should be focused on exploring **EFL** learners' mobile learning preparedness and skills prior to the implementation of **MALL** in the Iranian **EFL** context. Some experimental studies should also be conducted to investigate the perceptions of language teachers and learners toward actual practices of **MALL**. As there is a lack of research on **EFL** teachers acceptance of **MALL** implementation, more research should be focused on **EFL** teachers' perceptions of and attitudes toward the implementation of **MALL** in the future.

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Appendix A

Questionnaire on EFL teachers' MALL perspectives

Dear Participants,

The following questionnaire is part of a research project that investigates the perceptions of Iranian **EFL** teachers of the implementation of **MALL**. Your responses will be treated in strict confidence and individual teachers/schools will not be identified in any report or publication. Please answer all questions as accurately as you can.

Background information

Job/Position:

Institution/ Organization:

Province:

Gender:

Age:

Have you attended any teacher training/education courses yet? Yes..... No.....

How do you rate your English proficiency?

Elementary_____ Intermediate_____ Upper-intermediate_____ Advanced_____

What's your university degree?

What major have you studied at university?

What **EFL** courses do you teach?

Elementary_____ Intermediate_____ Upper-intermediate_____ Advanced_____

How long have been using mobile phones?

How long have you been teaching English?

*Section 1: **EFL** teachers' attitudes toward the use of mobile phones for language learning/teaching*

Items	Strongly disagree	Disagree	Agree	Strongly agree
1. The use of mobile phones will facilitate the process of language learning				
2. Portability is an important property of mobile devices				
3. The use of mobile phones can create interactive learning environments				
4. The multimedia used in mobile phones is useful for EFL learning				
5. Scaffolding can be provided for each learner through the use of mobile phones for language teaching				
6. Mobile phones can be used to teach/learn different language skills				
7. The use of mobile phones for language teaching/learning is cost-effective				
8. The use of mobile phones for language teaching/learning is time-efficient				
9. Mobile phones can be connected to the Internet at any time				
10. Mobile phones provide learners with ubiquitous language learning opportunities				

*Section 2: **EFL** teachers' perspectives on the challenges to the use of mobile phones for language learning/teaching*

Items	Strongly disagree	Disagree	Agree	Strongly agree
1. The small screen size of mobile phones				
2. Slow Internet speed				
3. Internet connectivity problems				
4. Students' non-use of mobile phones				
5. High costs of mobile phones				
6. High cost of connectivity to the Internet				
7. Students' lack of skill/knowledge to use mobile phones for academic purposes				
8. Incompatibility of the use of mobile phones with language teaching/learning				
9. Students' resistance to the use of mobile phones for academic purposes				
10. Lack of language learning mobile-based software and activities				

Section 3: *EFL teachers’ perceptions of the current use of mobile phones for their EFL courses*

Items	Never	Rarely	Sometimes	Frequently	Always
1. How often do you use mobile phones for your teaching practices?					
2. How often do students use mobile phones for their learning in your classes?					

Section 4: *EFL teachers’ perceptions of their ability to use/develop MALL activities and software*

Items	Not proficient	Fairly proficient	Undecided	Proficient	Very proficient
1. Designing MALL activities					
2. Ability to adapt your teaching styles/techniques to MALL					
3. Ability to evaluate MALL software tools					
4. Your ICT literacy to use mobile phones for language teaching					
5. Ability to use MALL software tools					